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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,076	07/13/2005	Kai Eck	DE030024US1	8935
24737	7590	02/01/2010	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS			ZELBERGER, DANIEL	
P.O. BOX 3001			ART UNIT	PAPER NUMBER
BRIARCLIFF MANOR, NY 10510			2624	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/542,076	<b>Applicant(s)</b> ECK, KAI
	<b>Examiner</b> DANIEL ZEILBERGER	<b>Art Unit</b> 2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

1) Responsive to communication(s) filed on 06 October 2009.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

4) Claim(s) 1,3,5,9,12,18,21-31 and 33 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) 9,12 and 25-31 is/are allowed.

6) Claim(s) 1,3,5,18,21-24 and 33 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_

#### **DETAILED ACTION**

This office action is in response to the Applicant's reply dated October 16, 2009.

##### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. *Claim 1* is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding **claim 1**, the claim provides for "marking elements exhibiting low absorption of **the X-rays**, the effect of which lies within the noise level of **the X-ray image**." However, the claim lacks antecedent basis for "the X-rays" and "the X-ray image." Accordingly, it is not entirely clear what the scope of the claim is. Appropriate correction is required, however for the purposes of examination, the limitation will be interpreted as --marking elements exhibiting low absorption such that the effect of the marking elements on the diagnostic image is within the noise level of the diagnostic image--.

##### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. *Claims 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Seeley et al. (US Patent 6,484,049), hereinafter referenced as Seeley.*

Regarding **claim 33**, Seeley discloses a method of determining the position of a patient in a diagnostic image, the patient being located on an examination table in an imaging region, the method comprising:

providing a pattern of marking elements (see column 9 lines 18-25, wherein an array of markers is provided);

generating a diagnostic image of the patient including the marking elements (see column 7 lines 19-30 and column 11 lines 44-47 and lines 61-63), the marking elements being configured such that the effect of the marking elements lies within the noise level of the diagnostic image (see column 12 lines 14-17, wherein not all markers will be located in the image due to shadowing of some of markers, or occlusion of the marker by another object of similar x-ray absorption response, and thus the effect of the markers is within the noise level of the image; the Examiner notes for clarity that this limitation defers from similar limitations in the allowed claims in that the Applicant has omitted the feature that the absorption of the markers is sufficiently low such that the effect of the marking elements lies within the noise level; more specifically, whereas in the allowed claims, the markers' absorption effects the image within the image's noise level, the current claim only requires that the markers' effect is within the image's noise level); and

detecting the pattern in the generated diagnostic image by the correlation of the diagnostic image with a filter image of the pattern (see column 12 lines 14-58, wherein in order to determine the pattern as a whole a correlation procedure is performed).

In addition, while the embodiment of Seeley discussed above fails to disclose claimed "attaching the pattern of marking elements to at least one of the patient that is being imaged and the examination table," the examiner maintains that it would have been obvious, in view of an alternative embodiment, to provide:

attaching the pattern of marking elements to at least one of the patient that is being imaged and the examination table (see column 18 lines 46-66, wherein it is disclosed that affixing the marker array to the support table addresses the issue of the limited flexibility in positioning the image detector near the patient).

Therefore, the examiner maintains that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Seeley, by specifically providing "attaching the pattern of marking elements to at least one of the patient that is being imaged and the examination table," for the purpose of increasing flexibility in position the image detector near the patient.

#### ***Response to Arguments***

5. None of the current rejections, which were necessitated by Applicant's amendments, have been addressed by the Applicant, and thus the Examiner refers Applicant to the rejections above.

***Allowable Subject Matter***

6. *Claims 1, 3, 5, 18, and 21-24* would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

7. *Claims 9, 12 and 25-31* are allowed.

Claim 1 has been amended to incorporate the feature of previously presented claim 4, which was previously indicated allowable for reasoning set forth in the prior office action. Accordingly, while some features of claim 1 have been modified to an extent, the reasoning set forth in the previous office action still holds, and thus claim 1 would now be allowable if rewritten to overcome the 35 USC 112 rejection. Claims 3, 5, 18, and 21-24 depend from claim 1 and are allowable for that reason.

Claims 9, 21, and 25-29 have had minor modifications made, but the reasoning set forth in the previous office action still holds, and thus claims 9, 21, and 25-29 are allowable.

Claims 30 and 31 were indicated allowable in the previous office action for reasoning set forth therein, and accordingly claims 30 and 31 are allowed.

To further reiterate and help clarify the reasoning for allowance, and to help Applicant ascertain what differentiates the allowed claims from claim 33, the allowable features of the claims are in essence that the marking elements are provided attached to a patient or a examination table, wherein an image is acquired including the marking elements, wherein the marking elements have an absorption amount that effects the image to an extent that is within the image's noise level, wherein the pattern of marking

elements can be detected by a correlation procedure using a filter image of the pattern. This defers from the prior art of record in that the prior art teaches marking elements that, while translucent and thus allowing some light to pass through of the underlying object, do not exhibit an absorption amount that effects the image to an extent that is within the image's noise level. Granted, the marking elements of the prior art could end up located in particular regions of an image such that they are not discernable from the underlying image, and thus within the image noise (i.e. Seeley at column 11 lines 14-17). However, the absorption of the marking elements is not within the image noise level.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL ZEILBERGER whose telephone number is (571)270-3570. The examiner can normally be reached on M-F 8:00-4:30pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571)272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel Zeilberger  
Examiner  
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DZ  
01/28/10

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